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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/367,797	01/19/2000	ANDREW JOHNSON	A-68362/DJB	4776

23735 7590 09/30/2003

DIGIMARC CORPORATION  
19801 SW 72ND AVENUE  
SUITE 100  
TUALATIN, OR 97062

EXAMINER
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KLIMACH, PAULA W

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 09/30/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

pre

<b>Office Action Summary</b>	Application No. 09/367,797	Applicant(s) JOHNSON ET AL.	
	Examiner Paula W Klimach	Art Unit 2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 May 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Specification*

1. This application does not contain an abstract of the disclosure as required by 37

CFR 1.72(b). An abstract on a separate sheet is required.

### Content of Specification

2.

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
  - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the

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applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the

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World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura et al (6,185,312 B1).

4. In reference to claims 1, 15, 27-28, and 33, Nakamura suggests a method for inserting identification or authentication data into digital media data, including the steps of: segmenting the digital media data into data blocks (part 11 of Fig. 1); applying a pseudo-random reversible function to a block of the digital media data to obtain a modified data block (part 3 of Fig. 1);

applying an orthogonal transform on the modified data block to obtain transform domain data modifying at least one selected transform domain data coefficient in accordance with the identification or authentication data (part 12 of Fig. 1); inverse transforming the transform domain data having the at least one modified coefficient; and applying an inverse pseudo-random function to obtain watermarked digital media data (part 15 of Fig. 1). See summary of invention.

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5. In reference to claims 2 and 16, the pseudo-random function applied to the data block is a keyed function controlled by a cryptographic key (column 5 lines 48-55).
6. In reference to claims 3 and 17, earlier mentioned pseudo-random function applied to the data block has a property of flattening the power spectral density of the data block due to the randomness of the process.
7. In reference to claims 4 and 18, application of the pseudo-random function and application of the orthogonal transform are carried out in the same operation (part 1 of Fig. 1).
8. In reference to claims 5 and 32, the at least one transform domain data coefficient, selected for modification, is selected according to a keyed pseudo-random operation (column 5 lines 56-62).
9. In reference to claims 6 and 19, a plurality of data blocks of the digital media data are modified according to the identification or authentication data (column 5 line 63 to column 6 line 3).
10. In reference to claims 7-8, 20-21, and 30-31, the digital media data is video data (motion picture 102, of Fig 5). The motion pictures also include audio data.
11. In reference to claims 9, 22, and 29, the identification or authentication data is inserted into the digital media data in real time (Fig. 5). The process for processing the motion picture happens in one device and therefore completed in real time, since there is no lag time added for transfer of equipment.
12. In reference to claim 10, at least one coefficient in the transform domain data, which represents the average (dc) of the data block, is restricted from selection for modification with the identification or authentication data (column 26 lines 49-59).

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13. In reference to claims 11-12 and 23-24, the orthogonal transform is a Walsh Hadamard transform, the is data is transformed to the time domain (column 8 lines 31-36) and Hadamord is a well know method. The orthogonal transform is selected from a discrete cosine transform, a discrete sine transform and a fast Fourier transform (column 21 lines 37-40).

14. In reference to claims 13 and 25, the pseudo-random reversible function is a permutation of the data block based on a keyed pseudo-random number generator (column 8 lines 45-56).

15. In reference to claims 14 and 26, determining an average of data values in the data block, subtracting the average value from the data values in the data block before applying the pseudo-random function, and adding the average value back to the data values in the data block after applying the inverse pseudo-random function (Fig 16).

16. In reference to claims 33 and 38, a media data monitoring system comprising: a media data buffer for temporarily storing media data received from a data source; a real time processor coupled to receive media data from the media data buffer and adapted to extract identification or authentication data [according to the method defined in claim 15] from the media data by: segmenting the digital media data into data blocks: applying apseudo.-random reversible function to a block of the digital media data to obtain a modified data block: applying an orthogonal transform to the modified data block to obtain transform domain data: and extracting the identification or authentication data from at least one coefficient of the transform domain data; and a comparison processor coupled to the real time processor for comparing the extracted identification or authentication data with known identification or authentication data (Fig. 3).

17. In reference to claim 34, the system includes an analogue-to-digital converter for converting media data into a digital form before processing by the real time processor (Fig. 7).

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18. In reference to claims 35, 36, 39 and 40, the media data comprises video data (part 127 on Fig. 7).

***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakamura et al

6,185,312

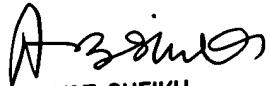
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paula W Klimach whose telephone number is (703) 305-8421.

The examiner can normally be reached on Mon to Fri 7:15 a.m to 3:45 p.m.

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4832.

PWK

  
AYAZ SHEIKH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100